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SUGHRUE MION, PLLC				
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EXAMINER				
KRUEER, KEVIN R				
ART UNIT		PAPER NUMBER		
1787				
NOTIFICATION DATE		DELIVERY MODE		
06/07/2011		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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# Office Action Summary

## Application No.

10/562,005

## Applicant(s)

GAURIAT ET AL.

## Examiner

KEVIN R. KRUEER

## Art Unit

1787

**Period for Reply**  
-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on April 5, 2011.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-14 and 17-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 and 17-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-945)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-14 and 17-25 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The claims state the styrene maleic anhydride copolymer has a specified "weight average molar mass." In support of said amendment, applicant points to page 11, lines 1-12. Said section has been fully reviewed and the examiner cannot find any explicit teaching regarding "weight average molar mass." It is believed applicant is attempting to rely upon the "MW" disclosure to support said amendment. While  $M_w$  (subscript emphasized) is commonly utilized in the art as shorthand for weight average molecular weight, MW (upper case W emphasized) is herein understood to refer to "molecular weight" since MW is typically used in the art to refer to molecular weight (e.g. US 3,621,034). Thus, the original disclosure does not contain support for the newly added "weight average molar mass" limitation.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 2, 4-14, 17 and 19-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito et al (US 4,690,856) in view of Gervasi (US 5,939,512).

Ito teaches a laminate comprising two metal sheets adhered together with a polyamide composition (abstract). The composition may comprise 50-99.5wt% of a polyamide, and 0.5-50wt% of a modified polyolefin formed by grafting a polyolefin with an unsaturated compound including carboxylic acids and a derivative thereof such as maleic acid anhydride (col 3, lines 1+). The metal sheets may comprise aluminum (col 5, lines 25+) and may be different from one another. The polyamide is a nylon 6 (col 2, lines 23+). The olefin may be polyethylene or a non-linear ethylene (col 2, lines 51+). The laminate may further comprise a resin layer between two adhesive layers (col 5, lines 38+).

With regards to claim 14, polyamide is considered to be the continuous stage since it comprises the majority of the composition.

With regards to claim 19, Ito teaches additives may be included in the adhesive (col 5, lines 6+). Thus, it would have been obvious to the skilled artisan to add a fire retardant to the composition because such additives are commonly used in such adhesives in order to improve fire resistance.

With regards to claims 21-23, Ito teaches said method limitations (col 5, lines 60+).

Ito fails to teach the addition of a styrene maleic acid anhydride copolymer with a molecular weight of 1,400 to 10,000. However, Gervasi teaches the addition of a low molecular weight styrene maleic anhydride polymer to a nylon composition in order to improve its viscosity, shape retention properties (col 5, lines 47+). The trade names taught in Gervasi are known in the art to have molecular weights which meet the claimed limitations. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to add a styrene maleic anhydride polymer having the claimed molecular weight to the composition taught in Ito in order to improve the viscosity and shape retention of the final product.

With respect to claims 17 and 25, it would have been obvious to optimize the amount of styrene maleic anhydride that was added to the composition in order to optimize the composition's viscosity and shape retention characteristics.

5. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ito et al (US 4,690,856) in view of Gervasi (US 5,939,512) as applied to claims 1, 2, 4-14 and 17-25, and further in view of applicant's admissions.

Ito teaches the metal sheets may be different but does not admit they may have different surface dimensions. However, Applicant admits laminates wherein the sheets have different surface dimensions are known in the art and called patchwork sheets (see page 4 of the specification). Thus, it would have been obvious to utilize sheets

with different surface dimensions in the laminate taught in Ito. The motivation for doing so would have been so the sheet had utility as a patchwork sheet.

6. Claims 18 rejected under 35 U.S.C. 103(a) as being unpatentable over Ito et al (US 4,690,856) in view of Gervasi (US 5,939,512) as applied above to claims 1,2, 4-17 and 19-24, and further in view of Ohmae et al (US 5,047,479).

Ito does not teach the adhesive should comprise an epoxy compound. However, Ohmae teaches a thermoplastic resin composition which is obtained from melt kneading 60-97 pbw polyamide, 3-40pbw ethylene copolymer comprising 40-90wt% ethylene and 5-60wt% unsaturated carboxylate unit, and 0.3-10wt% of maleic anhydride unit, and © 0.1-20pbw of a polyfunctional compound having at least two functional groups having reactivity to a carboxyl group, a carboxylic acid anhydride group or an amino group to effect partial crosslinking (abstract). Said polyfunctional compound may be a glycidyl bisphenol (col 4, lines 40+) and improves the heat resistance, impact resistance, and mechanical properties of the composition. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to add 0.1-20wt% glycidyl bisphenol A to the composition taught in Ito. The motivation for doing so would have been to improve the heat resistance, impact resistance, and mechanical properties of the composition. Herein, the epoxy compound is understood to read on the claimed reactive compound.

### ***Response to Argument***

Applicant's arguments filed 04/05/2011 have been fully considered but are not persuasive.

With the rejection of claims under 35 USC 112, second paragraph, Applicant argues that one of ordinary skill in the art would understand MW refers to weight average molecular weight, as denoted by  $M_w$ . Said argument is noted but is not persuasive as counsel's argument cannot take the place of evidence. Applicant has not offered any evidence supporting the concluding that MW would be understood by the skilled artisan to denote weight average molecular weight. To the contrary, the evidence of record suggests MW (upper case W emphasized) would be understood by one of ordinary skill in the art to refer to "molecular weight" since MW is typically used in the art to refer to molecular weight (e.g. US 3,621,034).

Applicant argues that the data sheets for the compounds discussed at page 11 of the specification demonstrate said compounds have weight average molecular weights within the claimed numerical range of 1,400 to 10,000. Said argument is noted but is not persuasive because said compounds also each has a number average molecular weight within the claimed numerical range. Merely because said compounds happen to have a  $M_w$  within the claimed range does not demonstrate the skilled artisan would have understood MW to refer to weight average molecular weight.

With regard to Ito in view of Gervasi, applicant argues Gervasi is not in the same field of endeavor since it is drawn to polymer material used in the production of molded articles while the present invention relates to the metal laminate. Furthermore, applicant argues Gervasi is not analogous because it is not reasonably pertinent to the problem of Ito. Said argument is noted but is not persuasive as the viscosity control would still be important to Ito in order to improve the processability of the composition. Furthermore,

shape retention at high temperatures would be desirable to prevent oozing of the adhesive at elevated temperatures.

For the reasons noted above, the rejections are maintained.

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KEVIN R. KRUER whose telephone number is (571)272-1510. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie Shosho can be reached on 571-272-1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Art Unit: 1787

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kevin R Kruer/  
Primary Examiner, Art Unit 1787